

REMARKS:

- 1) Referring to item 10) of the Office Action Summary, please indicate that the original drawings have been accepted, in the next official communication.
- 2) Referring to the Notice of References Cited (Form PTO-892) enclosed with the Office Action, please note that the inventor name should read --HENNECKEN-- rather than "HENNICKEN". Also, if this reference is being cited with the European Document No. EP 862,988, then the country should probably be indicated as --EP-- rather than "DE". However, it is noted that the EP 862,988 document corresponds with DE 197 09 644. Please make any corrections in the official file that might be necessary to ensure that this reference is correctly identified on the front page of any patent issuing from this application.
- 3) The specification has been amended by deleting the foreign priority claim at lines 3 to 8 of page 1. Nonetheless, the foreign priority of German Utility Model Application 200 05 255.1, filed on March 21, 2000 and German Utility Model Application 200 08 249.3, filed on May 12, 2000 is still claimed for this application, as indicated in the inventor's Declaration originally filed with the application.
- 4) The claims have been amended as follows.

Claim 1 has been amended to incorporate the subject matter of original claim 2. Claim 1 has also been amended to clarify

that the recited elastomer is a crosslinked elastomer as supported in the original specification, for example at page 6, line 12 to page 7, line 26.

Claim 2 has been canceled.

Claims 10 and 11 have been amended editorially and to conform with the amendment of claim 1.

Claims 19 to 21 have been added. New independent claim 19 is based on a combination of the subject matter of original claims 1, 2, 3 and 4. Claim 20 depends from claim 19 and is based on the subject matter of original claim 5. New independent claim 21 is based on subject matter from original claims 1, 2, 7 and 9.

Since the claim amendments and new claims are all supported by the original subject matter as explained above, the claim amendments and new claims do not introduce any new matter. Entry and consideration of the claim amendments and the new claims are respectfully requested.

- 5) For the Examiner's information, applicant is enclosing a copy of European Patent EP 1,136,248 B1 which issued from the European companion or counterpart of the present U. S. Application. The European Patent includes an English version or translation of the allowed European claims at the bottom of page 5 and the top of page 6 of the document. New independent claim 21, which has been added to the present U. S. application by the present amendment, generally conforms to granted claim 1 of the European Patent. Favorable consideration thereof is respectfully requested.

- 6) Referring to section 1 on page 2 of the Office Action, the objection to the disclosure has been taken into account in the present amendment. Namely, the foreign priority claim information has been deleted from lines 3 to 8 of page 1 of the specification. The Examiner is respectfully requested to withdraw the objection, because it no longer applies.
- 7) Referring to sections 2 to 6 on pages 2 to 3 of the Office Action, the rejection of claims 1, 10 and 11 as indefinite under 35 U.S.C. §112, second paragraph has been taken into consideration in the present amendment, and is respectfully traversed.

Regarding claim 1, the phrase "substantial portion" has been deleted. Amended claim 1 now clearly and definitely recites that the woven fabric includes an amount of at least one crosslinked elastomer, wherein the amount is at least 10 wt% of a total weight of the press pad. This provides a clearly defined minimum proportion or content.

Further regarding claim 1, the Examiner has asserted that it is unclear how the woven fabric contains the selected elastomer, for example "are the threads made from said elastomer or is said elastomer coated on the woven fabric?". In this regard, claim 1 has been amended to recite that the woven fabric includes (rather than "contains") the specified amount of the at least one crosslinked elastomer. A person of ordinary skill in the art can clearly understand what it means that the woven fabric includes a specified amount of at least one selected crosslinked elastomer. There is nothing unclear or indefinite about such a claim formulation. The Examiner's further inquiry regarding how the

woven fabric includes the specified elastomer does not relate to the clarity or definiteness of the claim terminology, but rather relates to the substantive scope thereof. In other words, the Examiner's question as to whether the elastomer is coated on the woven fabric or if the threads are made of the elastomer is not merely a clarification of the existing limitation that would be necessary for a clear understanding of the claim terminology, but rather would be a further substantive limitation which is not required to properly define or understand the invention, or to patentably distinguish the invention over the prior art. Moreover, the specification explains various different examples of "how" the woven fabric can include the selected elastomer (see e.g. page 9, line 20 to page 10, line 5; page 13, line 17 to page 14, line 3; etc.). It is not the place of the claims, but rather the written description, to explain "how" a claimed invention is to be practiced. It is for the claims merely to clearly define the salient features of the claimed invention. With the present terminology of amended claim 1, there would be no difficulty or question in the mind of a person of ordinary skill in the art in determining whether a particular woven fabric either does or does not include at least 10 wt% of a specified crosslinked elastomer.

Regarding claim 10, the same discussion of the issues in claim 1 also applies to this dependent claim.

Claim 11 has been amended to avoid the unnecessary recitation of "a proportion". Instead, amended claim 11 now simply recites that at least the warp threads or the weft threads include at least one metal. That can be clearly and distinctly understood by a person of ordinary skill in the art.

For the above reasons, and in view of the present amendments, the Examiner is respectfully requested to withdraw the rejection under 35 U.S.C. §112, second paragraph.

- 8) Referring to section 12 on page 6 of the Office Action, the indication of allowable subject matter in original claims 4 and 5 is appreciated. New independent claim 19 is based on a combination of the subject matter of original claims 1, 3, and 4, and a further clarification of the asserted indefiniteness by incorporation of subject matter of original claim 2. Claim 20 depending from claim 19 is based on original claim 5. Accordingly, claims 19 and 20 should now be allowable.
- 9) Referring to section 8 on page 3 of the Office Action, the rejection of claims 1 to 3, 10, 13, 17 and 18 as anticipated by Hennecken (EP 862,988 and DE 197 09 644) is respectfully traversed. The Examiner has cited the English Abstract of EP 862,988, but has also referred to the German Patent Publication, presumably DE 197 09 644, which is the German Patent Laying Open Publication corresponding to the European Publication EP 862,988. Thus, both the European Document and the German Document will generally be referred to as the Hennecken reference herein.
- 10) Present independent claim 1 is directed to a press pad for use in high temperature pressing equipment, comprising a woven fabric that includes at least 10 wt% of at least one crosslinked elastomer.

The fact that the recited elastomer is crosslinked has been clarified in the present amendment, based on the original disclosure (see e.g. page 6, line 12 to page 7, line 26). As explained in the original specification (see e.g. pages 6 and 7), it is important to distinguish between crosslinked elastomers on the one hand, and non-crosslinked polymers, e.g. thermoplastic polymers or compounds that are non-elastomeric on the other hand. Due to its crosslinked structure, a crosslinked elastomer exhibits substantial rubbery resiliency and extensibility, as well as strain recovery that restores the elastomer quickly to nearly its original shape after a distorting stress is removed. Also due to the crosslinked structure, such an elastomer cannot be repeatedly melted and resolidified, i.e. it does not have thermoplastic properties. Instead, once the elastomer has been crosslinked (e.g. vulcanized), the crosslinked structure is irreversible and essentially permanent, short of disruption of the polymer.

On the other hand, non-crosslinked polymers may be simple linear chain polymers or branched polymers, which typically exhibit thermoplastic properties, e.g. they may be repeatedly melted, flowed in a melted liquid condition, formed into a new shape (e.g. by various molding techniques), and then can be re-solidified in the new shape upon cooling. These properties are basically due to the absence of crosslinking.

Note that polytetrafluoroethylene (PTFE) is expressly categorized as not being a crosslinked elastomer for use in the inventive press pad (see page 7, lines 7 to 13 of the present specification). This is because polytetrafluoroethylene (PTFE, e.g. TEFLON®) is not crosslinked, but rather is a simple, single

linear chain polymer with only carbon atoms along the backbone or chain thereof, and fluorine atoms bonded laterally to the carbon backbone. Accordingly, PTFE is not a crosslinked elastomer, and does not exhibit properties of a crosslinked material or of an elastomer in particular.

Furthermore, present independent claim 1 recites a particular group among which the at least one crosslinked elastomer must be selected. One common element among all the possible elastomers in the specified group is fluorine. In other words, every possible elastomer among the specified group must include a fluorinated elastomer component. For example the elastomer could be selected among fluoroelastomers, fluorosilicone elastomers, crosslinked blends of silicone rubber and fluorosilicone rubber, or crosslinked blends of silicone rubber and fluorinated rubber. The present specification explains advantages achieved through the use of such fluorinated elastomers in the present high temperature press pad (see e.g. page 4, line 9 to page 5, line 26; page 8, line 22 to page 9, line 13; page 11, line 9 to page 12, line 7; etc.). For example, these substantial improvements or advantages over prior art press pads include extremely high resistance to chemical deterioration with respect to oils, gasoline, other petroleum products, aliphatic and aromatic olefins, fluorinated hydrocarbons and acids, as well as extreme high temperature resistance and durability.

The prior art neither discloses nor would have suggested a press pad as presently claimed, including at least one cross-linked elastomer with a fluorinated elastomer component.

11) As pointed out by the Examiner, Hennecken (EP 862,988 and DE 197 09 644) discloses a press pad comprising threads including a core and a sheath coating thereon, whereby the coating may be made of rubber and/or silicone elastomer and/or polytetrafluoroethylene (PTFE). That, however, does not correspond with, and would not have suggested, the presently claimed invention.

The silicone elastomer disclosed by Hennecken is not a fluorinated silicone elastomer. To the contrary, Hennecken does not disclose or suggest the use of any fluorinated elastomer. To the contrary, each possible selected elastomer according to present independent claim 1 is a fluorinated elastomer, such as a fluorosilicone elastomer or a crosslinked blend of silicone rubber and fluorosilicone rubber, or a crosslinked blend of silicone rubber and fluorinated rubber. While Hennecken discloses a silicone elastomer, Hennecken does not disclose or suggest any fluorinated elastomer component.

Hennecken further mentions polytetrafluoroethylene (TEFLON® or PTFE) as a thread coating material. While PTFE contains fluorine, PTFE is not a crosslinked elastomer. As generally discussed above, PTFE is a simple linear chain polymer with only carbon atoms along the backbone and fluorine atoms bonded laterally to the carbon atoms. PTFE is not crosslinked and does not exhibit elastomeric properties. Thus, while PTFE contains fluorine, it is not and would not have suggested a fluoroelastomer, a fluorosilicone elastomer, a crosslinked blend of silicone rubber with fluorosilicone rubber, or a crosslinked blend of silicone rubber and fluorinated rubber.

Even a combination of PTFE and silicone elastomer would not have corresponded to or suggested any of the crosslinked elastomer compositions specified in the Markush group in present amended claim 1.

- 12) For the above reasons, the Examiner is respectfully requested to withdraw the rejection of claims 1 to 3, 10, 13, 17 and 18 as anticipated by Hennecken.
- 13) Referring to section 10 on pages 4 to 5 of the Office Action, the rejection of claims 11, 12 and 14 to 16 as obvious over Hennecken in view of WO 96/13376 (Douglas et al.) is respectfully traversed.

Claims 11, 12 and 14 to 16 depend from independent claim 1, which has been discussed above in comparison to Hennecken. The Examiner has further referred to Douglas et al. for disclosures relating to the use of metal in a woven fabric of a press pad.

Even if the disclosures of Douglas et al. are considered in combination with those of Hennecken, the features of independent claim 1, as discussed above, would not have been suggested. Namely, Douglas et al. disclose a press pad comprising a woven fabric made of warp and weft threads, which comprise a silicone elastomer further in combination with metal wires. Douglas et al. do not disclose or suggest the use of a fluorinated elastomer, but rather only a simple silicone elastomer. In this regard, the disclosure of Douglas et al. does not go beyond that of Hennecken, regarding the silicone elastomer. Douglas et al.

do not disclose or suggest anything about the provision of fluorine in an elastomer in a press pad.

Thus, even considering the combined disclosures of Douglas et al. and Hennecken, a person of ordinary skill in the art would still have found no suggestion toward a fluoroelastomer, a fluorosilicone elastomer, a crosslinked blend of silicone rubber and fluorosilicone rubber, or a crosslinked blend of silicone rubber and fluorinated rubber, in a press pad. Accordingly, the benefits and advantages that are achieved according to the invention through the use of a fluorinated elastomer (as discussed above) would not have been achieved or expected even in view of a combination of the two references. Thus, independent claim 1, and its dependent claims 11, 12 and 14 to 16 would not have been obvious.

For the above reasons, the Examiner is respectfully requested to withdraw the rejection of claims 11, 12 and 14 to 16 as obvious over Hennecken in view of Douglas et al.

- 14) Referring to section 11 on page 5 of the Office Action, the rejection of claims 6 to 9 as obvious over Hennecken in view of U. S. Patent 4,985,483 (Saito et al.) is respectfully traversed.

Claims 6 to 9 depend from claim 1, which has been discussed above in comparison to Hennecken.

Saito et al. disclose a fluorinated rubber composition comprising a fluororubber and silicone in the form of a rubber, gel or resin. This mixture is intended to reduce the adhesion of the rubber composition on a mold tool during molding of the

rubber composition. The rubber composition is also intended to achieve a good adhesion onto a substrate in a finished product.

The present applicant acknowledges that Saito et al. disclose a mixture of fluororubber and silicone. The applicant does not contend that such a material, per se, is entirely unknown and novel by itself. To the contrary, it is admitted that a mixture of silicone and fluororubber is known as a moldable rubber composition. However, neither Saito et al. nor any other prior art reference gives any suggestion to provide such a rubber composition in a woven fabric of a press pad for a high temperature press. Most inventions involve a new application or new combination of previously known compositions and components. Accordingly, the invention of claim 1 is not directed to an elastomer composition of silicone and fluororubber by itself as an independent invention. Instead, claim 1 is directed to a high temperature press pad comprising a woven fabric that includes (as one possibility) a crosslinked elastomer comprising a crosslinked blend of silicone rubber and a fluorinated rubber.

Saito et al. do not make any suggestions toward using the disclosed rubber composition in a high temperature press pad. The Examiner points out that Saito et al. teach that the composition has good release properties, and that this would have motivated a person of ordinary skill in the art to incorporate the rubber composition of Saito et al. in a woven press pad according to Hennecken. This assertion is respectfully traversed, because the good release properties cited by Saito et al. have to do with releasing the rubber composition from mold tools or a rolling mill, so that the rubber composition can be molded without stick-

ing to or staining the mold surfaces (see Abstract; col. 1, lines 13 to 20; etc.). That does not suggest anything about the suitability of such a rubber composition in a woven fabric of a press pad as a finished product. It only teaches something about the characteristics of the rubber composition while it is being molded.

Saito et al. do not suggest anything about the suitable properties of the rubber composition as a finished product, in connection with the requirements of a press pad for a high temperature press. For example, Saito et al. do not suggest that the disclosed rubber composition would be suitable for addressing any of the problems discussed in the introductory portion of the present patent application (e.g. chemical resistance, high temperature resistance, mechanical compression resistance, durability, etc.).

It is also significant that the Saito et al. Patent was published earlier than, i.e. before, the Douglas et al. and Hennecken Patent references were published or even filed. The Hennecken and Douglas et al. references specifically relate to high temperature press pads, and they both list many different materials and combinations of materials that were deemed to be suitable for high temperature press pads, without listing or even suggesting the use of a fluorinated elastomer composition. That is because, up to the time of the present application, a person of ordinary skill in the art had never considered and had not been motivated to use a crosslinked fluorinated elastomer as a suitable material in a high temperature press pad. Neither Saito

et al. nor Hennecken nor Douglas et al. provided any suggestions in that regard.

For these reasons, a person of ordinary skill in the art would not have been motivated to combine the teachings of Saito et al. with those of Hennecken in the manner as proposed by the Examiner. The Examiner cannot use the knowledge of the present invention to support a hindsight reconstruction of the various features of the invention in different prior art references. In other words, the present claimed invention cannot be used as a guideline or blueprint for picking and choosing features from different prior art references. Rather, the suggestion to combine the features must be provided in the prior art itself. A hindsight rationalization based on advantages achieved by the invention is not the same thing as, and is not a substitute for, actual specific suggestions toward the proposed combination in the prior art.

- 15) For the above reasons, the Examiner is respectfully requested to withdraw the rejection of claims 6 to 9 as obvious over Hennecken in view of Saito et al.

16) Favorable reconsideration and allowance of the application, including all present claims 1 and 3 to 21, are respectfully requested.

Respectfully submitted,

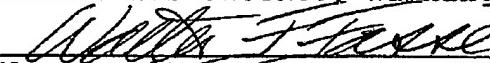
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 3/4/03
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